



Knowledge Level of Dry Skin Care in The Elderly at The Koto Tengah Regional Health Center

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ARTICLE INFO

Keywords:

Dry skin
Elderly
Knowledge level

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All authors have reviewed and approved the final version of the manuscript.

<https://doi.org/10.32539/BJI.v10i1.169>

ABSTRACT

Introduction. The occurrence of dry skin in the elderly requires good and extra skin care. The incidence and severity of dry skin increases with age. Dry skin conditions in the elderly can cause discomfort and can even cause disease, such as atopic dermatitis which is a disease caused by inflammation of the skin. This research aims to determine the level of knowledge of dry skin care in the elderly at the Koto Tengah Health Center in the city of Padang. **Methods.** This research was a descriptive observational study with a cross-sectional design. The sample in this study was selected by technique consecutive sampling and this research requires a minimum of 100 samples. **Results.** The knowledge level of dry skin care of the respondents is mostly in the medium category (62%), the age of the majority of respondents was in the age category of 60-70 years (65%), the sex of the majority of respondents was male (53%), most respondents had primary school education (56%), worked as laborer (26%), and live with their families (83%). **Conclusion.** The level of knowledge of nursing for most of the elderly dry skin is in the medium category.

1. Introduction

Elderly is defined in Law number 13/1998 as someone who reaches the age of over 60 years.¹ The elderly are a group of people who are undergoing a process of gradual change over a period of several decades. Elderly is a normal stage of development that will be experienced by every individual.²

Globally, the prevalence of older adults in 2020 was 727 million and is projected to increase to 1.5 billion by 2050.³ In 2019, East and Southeast Asia already had the largest elderly population in the world at 37%, and this position is expected to remain until 2050. Second place is Europe and North America with 28.5% of the elderly population, which is expected to shrink to 19.1% by 2050.⁴

The prevalence of the elderly in Indonesia in 2020 was 28 million people or 10.7% of the total population.¹ The prevalence of the elderly in West Sumatra in 2020 was 594,306 people or 10.83%.⁵ Meanwhile, the elderly population in Padang City in 2020 was 88,894 people and for the Koto Tengah Region, it was 13,581 people with a percentage of 15.28%.⁶

The aging process results in a decline in organ function, including the skin, and causes various other health problems in the elderly. The most easily observed indicator of aging is the change to dry skin. Dry skin is a common problem in the elderly and can cause distress to the sufferer. Dry skin can be defined as hydrolipid-deficient skin characterized by rough, cracked, scaly, and itchy skin.⁷

The prevalence of dry skin in the elderly worldwide in 2019 ranged from 29% to 85%.⁸ Based on reports of skin problems experienced by the elderly in Germany, Africa, and America, dry skin is the most common problem with a percentage of 40.6%.^{9,10} The prevalence of dry skin in Brazil, Australia, and Turkey is 35%-70%, and in Indonesia is 50%-80%.¹¹

Based on the data above, it shows that dry skin problems are most commonly experienced by the elderly. This is in line with research conducted by Cowdell in 2018 which states that 80.7% of elderly people experience dry skin.¹² In a 2018 study by Kottner et al in Belgium found that the prevalence of dry skin in the elderly was 60%.¹³

Dry skin can be caused by physiological changes in the skin and environmental influences.⁷ The occurrence of dry skin in the elderly is inseparable from the thinning of the epidermis; decreased supply of blood, fluid, and nutrients to the skin; slowed wound healing and immune response; disruption of thermoregulation, and reduced number of oil and sweat glands.¹⁴ At the cellular level, there may be decreased production of lipids and natural moisturizing factors in the stratum corneum. In addition to these changes, the elderly often have comorbid diseases that affect skin function.⁷

The incidence of dry skin in the elderly requires the elderly to take good and extra skin care.¹⁵ The incidence and severity of dry skin increase with age.¹¹ Dry skin conditions in the elderly can cause discomfort and can even cause disease, such as atopic dermatitis which is a disease caused by inflammation of the skin.¹⁶

Good care for dry skin can be achieved with a good level of knowledge in the elderly. Knowledge is obtained after someone receives and processes information. This process involves the five senses depending on the type of information captured. For example, visual information can be seen by the eyes, audio is captured by the ears, texture is touched by the skin surface, taste is felt by the tongue, and aroma is smelled by the nose. Most of the knowledge that a person has will be the background of a behavior that will be carried out, including skin care.¹⁵

Factors that influence a person's level of knowledge include level of education, experience, age, and sources of information. Education is an activity that aims to develop a person's mindset and personality. Education can be obtained formally or informally. Experience is an event that has been experienced and contains a life lesson so that with experience it can form a good individual in considering decisions to be taken and also form individuals to become more professional in the future. Age, the older a person gets, the more things he experiences in his life. This has a very important

role in shaping one's mindset and personality. Information source is a means by which a person obtains information. Sources of information used can take the form of print media and social media.¹⁷

Dadok Tunggul Hitam Public Health Center and Lubuk Buaya Public Health Center are geographically located in Koto Tengah District, Padang City. Based on data on elderly visits in 2021, the number of elderly visits at Dadok Tunggul Hitam Public Health Center was 1,971 people and Lubuk Buaya Public Health Center was 2,391 people. Dadok Tunggul Hitam Public Health Center and Lubuk Buaya Public Health Center are in the category of the highest elderly visits in Koto Tengah District, Padang City.

2. Methods

This research was a descriptive observational study using a cross-sectional design. Data were obtained from questionnaires given to the elderly at the Puskesmas in the Koto Tengah area of Padang City. Samples in this study were selected by consecutive sampling. The number of samples required was 100 samples.

3. Results

3.1 Frequency Distribution of Elderly Age at the Koto Tengah Regional Health Centre

Based on Table 1, it can be seen that the age of most respondents is in the 60-70 years age category, namely 65 respondents (65%).

3.2 Frequency Distribution of Elderly Gender at the Koto Tengah Regional Health Centre

Based on Table 2, it can be seen that the gender of most respondents is male, namely 53 respondents (53%).

3.3 Frequency Distribution of Elderly Education Level at the Koto Tengah Regional Health Centre

Table 1. Frequency Distribution of Elderly Age at the Koto Tengah Regional Health Centre, Padang City

Age	<i>f</i>	%
60-70 Years	65	65.0
71-80 Years	21	21.0
>80 Years	14	14.0
Total	100	100.0

Table 2. Frequency Distribution of Elderly Gender at the Koto Tengah Regional Health Centre, Padang City

Gender	<i>f</i>	%
Male	53	53.0
Female	47	47.0
Total	100	100.0

Table 3. Frequency Distribution of Education Level of the Elderly at the Koto Tengah Regional Health Centre, Padang City

Education Level	<i>f</i>	%
Primary School	56	56.0
Junior High School	12	12.0
High School	20	20.0
College	12	12.0
Total	100	100.0

Table 4. Frequency Distribution of Occupation of the Elderly at the Puskesmas of Koto Tengah Regional Health Centre, Padang City

Jobs	<i>f</i>	%
Retired civil servants	17	17.0
Retired military personnel, police	3	3.0
Private Pensioner	9	9.0
Retired BUMN	5	5.0
Farmers	9	9.0
Merchants	9	9.0
Labor	26	26.0
Housewife	22	22.0
Total	100	100.0

Table 5. Distribution of Frequency of Elderly Residence at Koto Tengah Regional Health Centre, Padang City

Place of Residence	<i>f</i>	%
On your own	17	17.0
With family (husband, children, grandchildren, etc.)	83	83.0
Social/ Nursing Home	0	0
Total	100	100.0

Table 6. Frequency Distribution of Knowledge Level of Elderly Dry Skin Care at Koto Tengah Regional Health Centre, Padang City

Level Knowledge	<i>f</i>	%
Good	20	20.0
Medium	62	62.0
Bad	18	18.0
Total	100	100.0

Based on Table 3, it can be seen that most of the respondents' education level is Primary School, namely 56 respondents (56%).

3.4 Frequency Distribution of Elderly Occupations at The Koto Tengah Regional Health Centre

Based on Table 4, it can be seen that the most common occupation of respondents is laborer, namely 26 respondents (26%).

3.5 Frequency Distribution of Elderly Residence at The Koto Tengah Regional Health Centre

Based on Table 5, it can be seen that generally respondents live with their families, namely 83 respondents (83%).

3.6 Frequency Distribution of Knowledge Level of Elderly Dry Skin Care at The Koto Tengah Regional Health Centre

Based on Table 6, it can be seen that the level of knowledge of dry skin care of respondents is mostly in the medium category, namely 62 respondents (62%).

4. Discussion

4.1 Frequency Distribution of Elderly Age at The Koto Tengah Regional Health Centre, Padang City

The results of the study found that the age of the most respondents was in the age category 60-70

years, namely 65 respondents (65%). The same research results found in Kansafitri's research (2019) show that age is dominated by elderly people aged 60 to 70 years, as many as 51.7% of respondents.¹⁸

According to Dalgleish (2022), dry skin affects 30% to 99.1% of people older than 60 years. Dry skin is usually caused by a lack of epidermal lipids and is the most common cause of pruritus in older adults. Pruritus can result in excessive scratching, skin injury, skin tears, sores, secondary infections, discomfort, and pain and can have a major impact on quality of life. Although all areas of the body may be affected in general, places with fewer sebaceous glands, such as the lower legs, forearms, hands, and feet, are more commonly affected. Dry skin primarily affects the outermost layer of the epidermis, the stratum corneum, which acts as a barrier against the external environment, providing protection against water loss. The stratum corneum consists of corneocytes, which are terminally differentiated keratinocytes containing natural moisturizing factors, such as urea, lactic acid derivatives, pyrrolidine carboxylic acids, amino acids, ammonia, uric acid, and inorganic salts and sugars. These natural moisturizing factors act as humectants (they attract and bind water to the skin), promote skin plasticity, optimal skin barrier function, and the shedding of healthy skin cells (desquamation). Corneocytes are embedded in a lipid matrix consisting of ceramides, fatty acids, and cholesterol. The lipid matrix prevents water evaporation and is responsible for the skin's chemical barrier. SC requires a minimum moisture content of 10% to remain pliable and avoid cracking.¹⁹

According to Berger et al (2013), skin aging is a natural process that occurs in all people. Skin aging will cause a decrease in sebum production and a decrease in stratum corneum function which will create xerosis (dry skin). More than 50% of the elderly suffer from dry skin which is a precipitating factor for pruritus and is a skin problem that is often experienced by the elderly.²⁰

4.2 Frequency Distribution of Elderly Gender at the Koto Tangah Regional Health Centre, Padang City

The results found that the gender of the respondents was mostly male, namely 53 respondents (53%). Different research results found in Kansafitri's research (2019) showed that the number of female respondents was more than male respondents, namely 60.3% of respondents.¹⁸ Savitri and Utami (2012) in their research found that most respondents were female (79.1%).²¹

Dry skin is more common in women than men. This is because women have thinner skin and women more often use irritative ingredients and perform skincare that can irritate the skin, while the

skin in men is thicker so that men are protected from UV exposure.¹¹ The difference in the results of the above study according to the researcher is due to the elderly population at the Koto Tangah Health Centre in Padang City being predominantly male.

Biologically, it can be seen that there are differences and life habits between men and women, which will affect their level of knowledge and lifestyle modifications.²² Men tend to work outdoors and allow continuous exposure to UV rays which can cause skin damage, one of which is dry skin, while elderly women will limit their outdoor activities.⁷ Women tends to have more awareness to protect skin health by using moisturisers.¹⁸

4.3 Frequency Distribution of Elderly Education Level at the Puskesmas of Koto Tangah Region The Koto Tangah Regional Health Centre, Padang City

The results of the study found that most of the respondents' education level was Primary School, namely 56 respondents (56%). The results of Kansafitri's research (2019) showed that most respondents had a Primary School and high school education level, namely, as many as 29.3% of respondents.¹⁸

Savitri and Utami (2012) in their research found that more than 50% of elderly knowledge about personal hygiene including dry skin is lacking due to a low level of education, namely the majority graduated from Primary School. This is evidenced in the results of statistical data showing that the education of respondents, namely 71 respondents (82.6%) have a primary school education, which is still a very low education, 9 respondents (10.6%) who are not in school, and 6 respondents (7%) who have a junior high school education.²³

Mazloomly et al (2012) that education will affect knowledge.²⁴ Factors that can affect a person's level of knowledge include level of education, experience, age, and sources of information. Education is an activity that aims to develop a person's mindset and personality. Education can be obtained formally or informally. Experience is an event that has been experienced and contains a life lesson, so that with experience it can form a good individual in considering decisions to be taken and also form individuals to become more professional in the future. Age, the older a person gets, the more things he experiences in his life. This has a very important role in shaping one's mindset and personality. Information source is a means by which a person obtains information. Sources of information used can take the form of print media and social media.¹⁷

Education is an activity that aims to develop a person's mindset and personality. Education can be obtained formally or informally. In the process of getting education, the environment has a considerable influence in getting this information

which underlies the formation of a person's knowledge and behaviour.²² In this study, elderly people who live with their families will have a good level of knowledge because of the family's role as a support system and information media for the elderly.²⁵

4.4 Frequency Distribution of Occupation of the Elderly at The Koto Tangah Regional Health Centre, Padang City

The results of the study found that the most common occupation of respondents was laborer, namely 26 respondents (26%). The results of research by Savitri and Utami (2012) showed that many respondents did not work (73.3%). The majority of respondents who did not work from the results of the study related to the age of the respondents, and the socio-economic background of the respondents.²³

The older the respondent's age, the lower the level of physical ability to be able to work for a living, while the socio-economic background can be interpreted that with the limited skills possessed by respondents, they find it difficult to carry out work activities in fulfilling their life needs, one of which is the inability of respondents to own sanitation facilities independently. For older people who are not civil servants or private employees, for example entrepreneurs, traders, and others generally reduce their activities after entering old age. This is often through no fault of their own, but rather due to the very few employment opportunities available to the elderly.²³

Based on interviews with the elderly, it was found that some elderly people did not work, this was related to age and socio-economics, but their previous work history was a laborer, there were 220,699 residents aged 15 years and over who were laborers in Padang City in 2022, there were several factors for the elderly choosing to work as laborers because they did not get formal education to college. The life of laborers is closely related to outdoor routines, this greatly affects physical health including skin health which is often exposed to chemicals and UV rays.^{26,7}

4.5 Frequency Distribution of Elderly Residence at The Koto Tangah Regional Health Centre, Padang City

The results of the study found that generally, the respondents lived with their families, namely 83 respondents (83%). According to Santoso (2019), family support is included in the supporting factors that can influence the life and lifestyle of the elderly which can improve the health status and quality of life of the elderly. Because the family is a support system that provides direct input to family members who experience physical, psychological, social, and environmental difficulties that will support the

improvement of the quality of life of the elderly.²⁵

Quality of life among the elderly is physical health, psychological health, social on functional conditions, and environmental conditions of the elderly. The level of independence, and physical, psychological, social, and environmental conditions affect the quality of human life. The quality of life of the elderly decreases due to the elderly experiencing many limitations in life so that the elderly need support from family, partners and society to improve quality of life. The surrounding environment has an important impact and contributes to the physical and social environment for the elderly. Residence as an important component of a cohesive and productive community as a place to interact with each other family members in terms of the level of trust, norms of reciprocity between individuals who enter social capital. Elderly who live with their families will get information that can increase their knowledge, especially in dry skin care.²⁷

4.6 Frequency Distribution of Knowledge Level of Elderly Dry Skin Care at The Koto Tangah Regional Health Centre, Padang City

The results of the study found that the level of knowledge of dry skin care of respondents was mostly in the medium category, namely 62 respondents (62%). The results of research by Savitri and Utami (2012) in their research found that most respondents' knowledge level was in the bad category, as many as 49 respondents (57%), 37 respondents (43%) with good knowledge. The better the level of knowledge a person has, the background of the behavior that will be carried out.²³

The results of the respondent's interview obtained a medium level of knowledge due to several living habits that the elderly apply in their daily lives, previously the elderly who live with their families will get information to increase knowledge about skin care, besides that the family plays a role in caring for and facilitating the needs of the elderly as physical health support including skin, this underlies the level of knowledge of the elderly in the medium category.²⁸

Modification of living habits is the main factor affecting the occurrence of dry skin. One of them is fluid intake, air humidity, bathing habits, taking vitamins or fruits and vegetables regularly, while topical treatments on the skin are rarely done by respondents. Men in the study had a poor level of knowledge in the use of moisturizers. In theory, the use of moisturizers is needed by the skin because it can increase skin capacitance, and reduce transepidermal water loss.⁷ According to Anggowarsito (2014) the management of geriatric skin disorders requires special attention. A good level of knowledge of pathogenesis, especially

changes in structure and function in geriatric skin, will lead to the selection of appropriate therapy or treatment.²¹

According to Anggowarsito (2014), dry skin is the most common skin disorder found in the elderly. Dry skin occurs due to decreased activity of sweat glands and sebaceous glands so that sweat and sebum production is reduced. Decreased levels of estersterol and triglycerides further exacerbate the situation. The main complaint is itching, due to repeated scratching, erosion, and excoriation can occur so that pathogens or exposed chemicals can easily enter the skin, and this situation increases the risk of infection and inflammatory skin reactions. Environmental factors such as low humidity, sun exposure, and the use of non-moisturizing body wash can trigger xerosis. Diseases common in the elderly, such as kidney disease, diabetes mellitus, thyroid disease, or those on diuretic therapy, antiandrogens, zinc and essential fatty acid deficiency can also cause dry skin.²¹

5. Conclusion

Based on the results of research on the level of knowledge of dry skin care in the elderly at the Koto Tengah Regional Health Center, it can be concluded that: the level of knowledge of dry skin care in the elderly is mostly in the medium category, the age of most respondents is 60-70 years old, the gender of most respondents is male, most of the respondent's education level is primary school, most of the respondents' jobs are laborers, and generally the respondents live with family.

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